

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 21

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte FRANK M. LOCOTOS

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Appeal No. 1999-1529  
Application No. 08/366,985<sup>1</sup>

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ON BRIEF

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Before McCANDLISH, Senior Administrative Patent Judge, COHEN and  
NASE, Administrative Patent Judges.

NASE, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 1, 38, 39 and 41 to 49. Claims 50 to 52 have been objected to as depending from a non-allowed claim. Claims 2 to 37, 40 and 53 have been canceled.

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<sup>1</sup> Application for patent filed December 30, 1994. According to the appellant, the application is a continuation of Application No. 07/765,374, filed September 25, 1991, now U.S. Patent No. 5,378,087.

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Application No. 08/366,985

We REVERSE.

BACKGROUND

The appellant's invention relates to a mining support and a method of supporting rock in a mine. An understanding of the invention can be derived from a reading of exemplary claims 1, 38 and 39, which appear in the appendix to the appellant's brief.

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

Yokota et al. (Yokota)	3,899,892	Aug. 19,
1975		
Scott	4,265,571	May 5,
1981		
Harding et al. (Harding)	1,143,471 <sup>2</sup>	Feb. 14,
1963		
	(Germany)	
Cranko et al. (Cranko)	0 126 534	Nov. 28,
1984		
	(European Patent Application)	

Claim 39 stands rejected under 35 U.S.C. § 102(b) as being anticipated by Scott.

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<sup>2</sup> In determining the teachings of Harding, we will rely on the translation provided by the PTO. A copy of the translation is attached for the appellant's convenience.

Claims 1 and 41 to 49 stand rejected under 35 U.S.C. § 103 as being unpatentable over Scott in view of Harding or Yokota.

Claim 38 stands rejected under 35 U.S.C. § 103 as being unpatentable over Cranko.

Rather than reiterate the conflicting viewpoints advanced by the examiner and the appellant regarding the above-noted rejections, we make reference to the answer (Paper No. 20, mailed December 7, 1998) for the examiner's complete reasoning in support of the rejections, and to the brief (Paper No. 19, filed October 26, 1998) for the appellant's arguments thereagainst.<sup>3</sup>

#### OPINION

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<sup>3</sup> Since the obviousness-type double patenting rejection set forth in the final rejection (Paper No. 15, mailed December 17, 1997) was not set forth in the examiner's answer we conclude that this ground of rejection has been withdrawn by the examiner. See Ex parte Emm, 118 USPQ 180, 181 (Bd. App. 1957).

In reaching our decision in this appeal, we have given careful consideration to the appellant's specification and claims, to the applied prior art references, and to the respective positions articulated by the appellant and the examiner. As a consequence of our review, we make the determinations which follow.

#### **The anticipation rejection**

We will not sustain the rejection of claim 39 under 35 U.S.C. § 102(b) as being anticipated by Scott.

To support a rejection of a claim under 35 U.S.C. § 102(b), it must be shown that each element of the claim is found, either expressly described or under principles of inherency, in a single prior art reference. See Kalman v. Kimberly-Clark Corp., 713 F.2d 760, 772, 218 USPQ 781, 789 (Fed. Cir. 1983), cert. denied, 465 U.S. 1026 (1984).

Claim 39 recites a method of supporting rock in a mine comprising, inter alia, the steps of (1) drilling a first bore hole and a second bore hole; (2) inserting a resin cartridge

into each bore hole; (3) orienting a first and second end of a cable within a separate bore hole, each end having a wire strand positioned about it for mixing the resin cartridges and a drive ferrule; (4) forcing the ends of the cable into their respective bore holes; (5) puncturing the respective resin cartridges with the respective cables [sic, ends of the cable]; (6) mixing the resin in the resin cartridges so the resin will harden the respective ends of the cable as the ends of the cable move through the ruptured resin cartridges; and (7) tightening the cable between the bore holes.

The appellant argues (brief, pp. 14-15) that (1) Scott does not teach the claimed "resin cartridge" since Scott teaches a cement capsule and cement is not a resin, and (2) Scott does not teach the claimed "mixing" step. We agree. In that regard, while Scott may suggest using an anchor material other than cement (see column 4, lines 48-52), Scott does not teach the use of resin as the anchor material. Accordingly, claim 39 is not anticipated by Scott. Likewise, Scott does not teach the claimed "mixing" step since Scott does not teach mixing resin with the ends of his cable 16.

Since all the limitations of claim 39 are taught by Scott for the reasons stated above, the decision of the examiner to reject claim 39 under 35 U.S.C. § 102(b) is reversed.

**The obviousness rejections**

We will not sustain the rejection of claims 1, 38 and 41 to 49 under 35 U.S.C. § 103.

In rejecting claims under 35 U.S.C. § 103, the examiner bears the initial burden of presenting a prima facie case of obviousness. See In re Rijckaert, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993). A prima facie case of obviousness is established by presenting evidence that would have led one of ordinary skill in the art to combine the relevant teachings to arrive at the claimed invention. See In re Fine, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988) and In re Lintner, 458 F.2d 1013, 1016, 173 USPQ 560, 562 (CCPA 1972).

*Claims 1 and 41 to 49*

Independent claim 1 recites a mining support for supporting rock within a mine comprising, inter alia, a cable, a bending restrictor, and "means for mixing resin in a resin cartridge as the cable is inserted into a bore hole drilled in the rock in which the resin cartridge is disposed, said mixing means positioned about the cable."

The examiner implicitly found (answer, pp. 3-4) that the only difference between Scott and claim 1 was the bending restrictor limitation. With regard to this difference, the examiner determined that it would have been obvious to one of ordinary skill in the art at the time the invention was made to have substituted a bending restrictor such as taught by Harding or Yokota for the tube 21A of Scott.

The appellant argues (brief, pp. 17-20) that the examiner's implicit finding that the only difference between Scott and claim 1 was the bending restrictor limitation is in error. Specifically, the appellant contends that Scott does not teach or suggest a resin cartridge as explained above.



Additionally, the appellant argues that Scott does not teach or suggest the recited "mixing means."

We agree with the appellant that Scott does not teach or suggest a resin cartridge or mixing means as set forth in claim 1. In our view, Scott does not teach or suggest the use of resin as the anchor material.<sup>4</sup> Likewise, Scott does not teach or suggest the claimed "mixing means" since Scott does not teach mixing resin in a resin cartridge with the ends of his cable 16 and Scott does not disclose a mixing means positioned about the cable 16.<sup>5</sup> In addition, we have reviewed the references to Harding and Yokota but find nothing therein which makes up for the deficiencies of Scott discussed above.

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<sup>4</sup> While Scott does suggest the use of material other than cement as the anchor material, Scott does not specifically suggest the use of resin as the anchor material.

<sup>5</sup> Scott's reinforcing bar (see Figure 7) is not considered by us to be an equivalent of the claimed "mixing means" since the spiral portion thereof is not positioned about the cable.

For the reasons stated above, the decision of the examiner to reject independent claim 1, and claims 41 to 49 dependent thereon, under 35 U.S.C. § 103 is reversed.

*Claim 38*

Claim 38 recites a method of supporting rock in a mine comprising, inter alia, the steps of (1) digging a bore hole in rock; (2) inserting a resin cartridge into the bore hole; (3) inserting a cable into the bore hole; (4) mixing the resin with the cable to form an anchor with the rock; and (5) tensioning the cable.

The examiner implicitly found (answer, pp. 4-5) that the only difference between Cranko and claim 38 was the tensioning step. With regard to this difference, the examiner determined that it would have been obvious to one of ordinary skill in the art at the time the invention was made to have tensioned Cranko's anchor cable since it was old and well known in the art.

The appellant argues (brief, p. 24) that the examiner's implicit finding that the only difference between Cranko and claim 38 was the tensioning step is in error. Specifically, the appellant contends that Cranko does not teach or suggest a resin cartridge. Additionally, the appellant argues that Cranko does not teach or suggest the recited mixing step.

We do not agree with the appellant that Cranko does not teach or suggest a resin cartridge as set forth in claim 38. In that regard, the two compartment capsule shown in Figures 3 and 4 is clearly disclosed on pages 9-10 as containing a resin. Thus, it is our opinion that the claimed "resin cartridge" is readable on Cranko's two compartment capsule.

We agree with the appellant, however, that Cranko does not teach or suggest the claimed mixing step. In that regard, Cranko does not teach or suggest that the resin in Cranko's two compartment capsule is mixed with a cable to form an anchor with the rock. Instead, in the embodiment of Figures 3 and 4, Cranko teaches that the resin in Cranko's two compartment capsule is mixed with a **bolt** B to form an anchor,

not the **rope** R (i.e., cable) which is anchored by a cement capsule in the embodiment of Figures 1 and 2.

For the reasons stated above, the decision of the examiner to reject claim 38 under 35 U.S.C. § 103 is reversed.

CONCLUSION

To summarize, the decision of the examiner to reject claim 39 under 35 U.S.C. § 102(b) is reversed and the decision of the examiner to reject claims 1, 38 and 41 to 49 under 35 U.S.C. § 103 is reversed.

REVERSED

HARRISON E. McCANDLISH	)	
Senior Administrative Patent Judge	)	
)	)	
	)	
	)	
	)	BOARD OF PATENT
IRWIN CHARLES COHEN	)	APPEALS
Administrative Patent Judge	)	AND
	)	INTERFERENCES
	)	
	)	
	)	
JEFFREY V. NASE	)	
Administrative Patent Judge	)	

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APPLICATION NO. 08/366,985

APJ NASE

APJ COHEN

SAPJ McCANDLISH

DECISION: **REVERSED**

Prepared By: Gloria Henderson

**DRAFT TYPED:** 08 Jul 99

**FINAL TYPED:**